

REMARKS/ARGUMENTS

Claim 1 has been amended to include the limitation of claim 2, and further reciting the heat shrink sleeve extending axially into the gap, thereby defining more clearly over the prior art of record.

Claims 1-13 stand rejected under 35 U.S.C. §103 as being unpatentable over Freitag et al. U.S. 4,281,884 in view of Kaufmann et al. U.S. 5,791,445. To the extent that this rejection would be applied to claim 1 as presently amended, such rejection is traversed for the reasons following.

Freitag discloses a piston-cylinder unit having a cylindrical pressure tube which is formed with an end wall having an end face and a ring-shaped gap between the piston rod and the end face. A heat shrink sleeve surrounds the cylinder but does not enclose the end face. It is therefore possible for moisture to enter between the heat shrink sleeve and the pressure tube.

Kaufmann discloses a heat shrink sleeve 22 having a cylindrical segment 24 that wraps around an axial portion of the piston rod 14 to prevent penetration of moisture to the cylinder 12. Details of the end of the cylinder 12 are not shown, but it is clear that the sleeve does not extend axially into a gap and does not enclose an end face as that term is defined in applicants' claims. Applying the sleeve of Kaufmann to the piston-cylinder unit of Freitag would not result in the structure claimed by applicants, because the sleeve segment 24 of Kaufmann would extend away from the gap, not into the gap.

The disadvantage of Kaufmann's sleeve 22 is that it is exposed to wear where it contacts the moving piston rod. As the sleeve segment 24 wears, it enables moisture to penetrate the seal and the interface between the sleeve and the cylinder wall. Applicants heat shrink sleeve, on the other hand, seals this interface without any contact with the piston rod. This is accomplished

by having the sleeve extend axially into the gap, enclosing the radially inward facing end face of the cylinder.

Newly submitted independent claim 14 includes the limitations of claims 1-5 and 8, albeit without explicitly reciting the end face. However the sleeve is recited as extending into the annular channel in the end ring, necessarily covering the end face. Neither Frietag nor Kaufmann discloses an end ring having an annular channel.

The claims as amended and newly presented being definite and patentable over the art of record, withdrawal of the rejections and early allowance are solicited. If any objections remain, a call to the undersigned is requested.

It is believed that no fees or charges are required at this time in connection with the present application; however, if any fees or charges are required at this time, they may be charged to our Patent and Trademark Office Deposit Account No. 03-2412.

Respectfully submitted,

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